

Attorney Docket No.: KUZ-0018
Inventors: Yasukochi et al.
Serial No.: 10/502,412
Filing Date: July 23, 2004
Page 3

This listing of the claims will replace all prior versions and listings of claims in the application:

Listing of the claims:

Claim 1-4 (canceled)

Claim 5 (previously presented): The production process according to Claim 27 or 28, wherein the crosslinking functional group is a hydroxyl group, and the crosslinking agent is boric acid.

Claim 6 (canceled)

Claim 7 (previously presented): A medical patch comprising a pressure-sensitive adhesive shaped product produced by the process according to Claim 27 or 28, said pressure-sensitive adhesive shaped product containing substantially no water.

Claim 8-9 (canceled)

Claim 10 (previously presented): The production process according to claim 27, wherein the crosslinking is carried out at 60°C to 150°C.

Claim 11 (previously presented): The production process according to claim 10, wherein the crosslinking is carried out at 100°C to 150°C.

Attorney Docket No.: **KUZ-0018**
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Serial No.: **10/502,412**
Filing Date: **July 23, 2004**
Page 4

Claim 12 (previously presented): The production process according to claim 27, wherein the crosslinking is carried out for approximately 15 minutes to one hour.

Claims 13-15 (canceled)

Claim 16 (previously presented): The production process according to claim 27, wherein the crosslinkable monomer unit is selected from hydroxyl group-containing acrylate monomers and hydroxyl-group containing methacrylate monomers.

Claim 17 (previously presented): The production process according to claim 16 wherein the hydroxyl group-containing acrylate monomer is selected from 2-hydroxyethyl acrylate, 3-hydroxypropyl acrylate and 4-hydroxybutyl acrylate.

Claim 18 (previously presented): The production process according to claim 16 wherein the hydroxyl group-containing methacrylate monomer is selected from 2-hydroxyethyl methacrylate, 3-hydroxypropyl methacrylate and 4-hydroxybutyl methacrylate.

Claim 19 (currently amended): The production process of claim 27, wherein the polymer is a copolymer of 2-hydroxyethyl acrylate, ~~2-ethylhexyl acrylate or N-vinyl-2-pyrrolidone~~ or 2-ethylhexyl acrylate.

Claim 20 (canceled)

Attorney Docket No.: KUZ-0018
Inventors: Yasukochi et al.
Serial No.: 10/502,412
Filing Date: July 23, 2004
Page 5

Claim 21 (previously presented): The production process according to claim 28 wherein the crosslinking is carried out at 60°C to 150°C.

Claim 22 (previously presented): The production process according to claim 21 wherein the crosslinking is carried out at 100°C to 150°C.

Claim 23 (previously presented): The production process according to claim 28 wherein the crosslinking is carried out for approximately 15 minutes to one hour.

Claim 24-26 (canceled)

Claim 27 (currently amended): A process for the production of a medical patch, said process comprising:

- (a) dissolving in a lower alcohol:
 - (i) a hormonal drug selected from estradiol and norethisterone acetate; and
 - (ii) an acrylic polymer or a methacrylic polymer having at least one hydroxyl or carboxyl group in a crosslinkable monomer unit;
- (b) adding to the solution of step (a) one or more crosslinking agents selected from the group consisting of metal alcoholates, boric acid, borate and borate ester;
- (c) spreading the mixture of step (b) on a film; and
- (d) thermally crosslinking the polymer of (ii) with the one or more crosslinking agents of step (b) either simultaneously with or followed by laminating to a support, collectively thereby to form the medical patch.

Attorney Docket No.: KUZ-0018
Inventors: Yasukochi et al.
Serial No.: 10/502,412
Filing Date: July 23, 2004
Page 6

Claim 28 (currently amended): A process for the production of a medical patch, said process comprising:

- (a) dissolving in a lower alcohol:
 - (i) a drug selected from estradiol and norethisterone acetate; and
 - (ii) one or more crosslinking agents selected from the group consisting of metal alcoholates, boric acid, borate and borate ester;
- (b) adding to the solution of step (a) an acrylic polymer or a methacrylic polymer having at least one hydroxyl or carboxyl group in a crosslinkable monomer unit to the solution;
- (c) spreading the mixture of step (b) on a film; and
- (d) thermally crosslinking the polymer of step (b) with the one or more crosslinking agents of (ii) either simultaneously with or followed by laminating to a support, collectively thereby to form the medical patch.

Claim 29 (new): The production process according to claim 27, wherein the polymer contains N-vinyl-2-pyrrolidone as a monomer unit.